

Release Notes LaGriT version of Spring 2002

A summary of the major changes found in this release are listed below. A complete list of changes is included at the end of this document. Refer to the user's manual for a complete description of the new, enhanced and revised commands.

New Commands:

stack **stack/fill** **stack/reorder** read tri or quad surfaces combine into one cmo and fill with prisms or hexes

mode **mode/discrete**/surface_cmo/tolldamage - all refinement smoothing operations on this surface must result in nodes that are members of surface_cmo

mode/recon/[**delaunay**|**geometry**|**adaption**] choose reconnection mode - delaunay flip to restore delaunay, geometry will flip to create 'plump' elements, adaption will flip to reduce solution error

mode/adaption **field**/field_name/scale_factor/4d_refine_length/4d_merge_length/4d_damage/percent_to_refine/error_cut_off_refine - if this mode is on adaptive massage will be in effect

sethessian **sethessian/user** make the 2nd derivative matrix from the routine supplied by the user

sethessian/erradpt make the 2nd derivative matrix from the user supplied edge errors

sethessian/field_name/[algorithm choice] make the 2nd derivative matrix base on the supplied field and algorithm (default is the mega algorithm)

Enhanced Commands:

refine **refine** allow **eltset**,**get**,**eltsetname** wherever **pset** **get** **psetname** was previously allowed.

math **math/sum**
math/integrate

Bugs:

08/07/01	closed_surfaces	fix undefined variable
11/06/01	damp_pt_by_value,	put mega3d_nosb, getiedge polyfun_nosb.f corrected the problem involving the nondistinction of differently colored but coincident edges
12/06/01	hextotet_hybrid	add error checking, avoid cmo_interpolate bug
12/17/01	refine_tet_add	get correct cmo name
11/09/01	interesect_elements	fix incorrect declaration
07/28/01	lower_d_lg	fixed test for increasing attribute space
12/17/01	refine_nosb	fix errors in faceedge and tetedge options
12/20/01	cmo_addatt_nosb	fix type declarations
01/16/02	mergepts_simplex	use epsilon for inversion tests
03/21/02	rz	fix line mode
03/22/02	dump_geometries_lg_nosb, geometry_release_lg, read_geometries_lg_nosb	allow for mesh object with no geometry
03/25/02	refine_edge_2d	reset ipointj at end

03/25/02 control_command_lg reuse space if names are reused in define commands

Code Changes:

12/06/01	eset_nosb	Fixed multiple calls to eltset so that it behaves like pset(i.e. contents of a named eltset reset at each call)
12/06/01	cmo_set_mesh_type	add error checking
08/28/01	cmo_addatt	allow permanent or temporary persistence
11/28/01	cmo_copyatt	allow element attributes to be copied to nodes that are element vertices
07/27/01	cmo_set_mesh_type	changed subroutine name from cmo_mesh_type
07/27/01	cmo_status	added 'brief' option
12/04/01	cmo_interpolate	add error checking
11/26/01	unpackpc	simplify the logic
07/15/01	freemove	pass in info that determines move
11/06/01	getiedge	distinguish between coincident but different material edges
11/28/01	intrap_gtg	add tiemat option
07/27/01	isosurface	set edges_per_element
01/07/02	sethessian, damp_pt_by_value, evaluate_sobolevnorm, hess3d, interpolate_hessian	- use sethessian
01/07/02	cel_chain, refine_spawn_lg, refine_coupling_coef, popcones_lg, csl, cer-chain, cel, popcomponents_lg	use return flag from refine_edge_add_tet to terminate iterations if refine does nothing
01/08/02	flip2to3b_nosb, flip2to3, hmemadjb_nosb	remove warning message
01/08/02	connect_nosb	spelling error
01/01/02	math_sum, math_integrate	new options
01/14/02	rotateln_nosb, rotatept_nosb	rotate only coordinates - skip other attributes
01/30/02	table_element	clean-up
03/31/02	distance_to_sheet, testdamage, edgfun_lg point_to_plane, freemove_nosb, mega3d_inner_loop, mega3d_nosb, massage, refine_edge_add, sgd, cee_chain, polyfun_nosb, adg3d, mode_lg, msgtty_nosb	changes for adaptive massage and for discrete mode
02/06/02	perturb_lg	fix calling sequence
02/25/02	recon2_nosb	fix debug output
03/05/02	quadxyz, quadxy, read_sheetij	format changes
03/07/02	extract_surfmesh	better error checking
03/21/02	partition, refine_edge_3d, addmesh_amr, voronoi_stor, grid_to_grid, addmesh_overlap, addmesh_merge	pull routines out of temp.f